



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,751	12/17/2003	Timothy M. Richardson	31655-2081	5685
33721	7590	05/02/2005	EXAMINER	
TORYS LLP 79 WELLINGTON ST. WEST SUITE 3000 TORONTO, ON M5K 1N2 CANADA			NGUYEN, THONG Q	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,751

Applicant(s)

RICHARDSON, TIMOTHY M.

Examiner

Thong Q. Nguyen

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/743,222.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/17/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to the pre-amendment filed on 2/21/2005. It is noted that in the mentioned preamendment, applicant has made amendments to the specification and the abstract.
2. The amendment filed on 2/21/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: First, the feature related to the connection between the braces and the sides of the C-shaped frame as provided in the newly-added section [0015.2]; Second, the feature related to the adjustment in the length of the brace by forcing the brace to move in a direction transverse to the vertical optical axis as provided in the newly-added sections [0015.5] – [0015.6].

Applicant is required to cancel the new matter in the reply to this Office Action.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/743,222, filed on 4/11/2001.

Drawings

4. The drawings contained four sheets of figures 1-4a were received on 2/21/05. These drawings are objected by the examiner for the following reasons.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

First, the feature related to a C-shaped frame connecting the head portion and the base portion as recited in claims 1 and 18;

Second, the feature related to the connection of the braces to the sides of the C-shaped frame as recited in claims 2 and 18;

Third, the feature related to a hydraulic cylinder for coupling the braces together as recited in claims 7 and 16; and

Fourth, the feature related to a piezoelectric strut or a piezoelectric layer in a strut for coupling the braces together as recited in claims 8 and 16.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: In particular, the numerical references "452" and "456" shown in figure 4a are not mentioned in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance

Specification

7. The lengthy specification which is amended by the preamendment of 2/21/05 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

8. The disclosure is objected to because of the following informalities: a) Page 1: section [0001], line 3, the terms thereof "Patent No. _____ on _____" should be changed to --Patent No. 6,704,140 on March 9, 2004--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 2, 14, 16 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a) Claim 2 is rejected under 35 USC 112, first paragraph because the disclosure, as original filed, does not provide support for the connection between the braces and the sides of the C-shaped frame as recited in claim 2. Applicant should note that while the disclosure, as original filed, in particular, sections [0039]-[0041] discloses that the invention includes or adds braces which connect the head of the microscope to the base of the microscope (see section [0040]) which microscope has a C-shaped frame (see section [0039]); however, the disclosure as original filed does not disclose that the braces are mounted to the sides of the C-shaped frame so as to enable frontal access to the stage as claimed.

b) Claim 14 is rejected under 35 USC 112, first paragraph because the disclosure, as original filed, does not provide support for the feature related to the adjustment in length of the brace by forcing the brace to move in a direction transverse to the vertical optical axis as claimed.

c) Claim 16 is rejected under 35 USC 112, first paragraph for the similar reason as set forth in element b) above.

d) Claim 18 is rejected under 35 USC 112, first paragraph for the similar reason as set forth in element a) above.

Claim Objections

11. Claim 8 is objected to because of the following informalities. Appropriate correction is required.

In claim 8: on line 1, "A Microscope" should be changed to --A microscope--.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (WO 01/35151, submitted by applicant).

Mayer discloses a microscope and a mechanism attached to the frame of the microscope for increasing the stability and precision, The microscope as described in pages 26-28 and shown in figures 7-8 comprises a C-shaped frame for supporting a head portion supporting an objective lens and a base portion supporting a stage. The mechanism for increasing the stability and precision comprises a brace assembly (200) extended in a vertical direction parallel to the direction of the microscope and which assembly comprises an upper section (220) connected to an upper portion which is attached to the mentioned head portion and a lower section (218) connected to a lower portion (212) which is

attached to the mentioned base portion. In page 28, lines 7-12, Mayer also suggest the use of a combination of braces instead of a single brace.

As a result the mechanism having a brace assembly provided by Mayer meets all of the features recited in claim 1 except the shape of the brace assembly. In other words, Mayer does not disclose that the shape of the brace assembly is a curvilinear configuration. However, a change in shape is considered as an obvious matter and within the level of one skilled in the art as decided in the Courts. See *In re Dailey et al*, 149 USPQ 47 (CCPA 1976). Further, the use of a brace assembly having shape different than from a linear configuration is also implied by Mayer as can be seen in page 28, lines 10-12. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the brace assembly connecting the head portion and the base portion of a microscope as provided by Mayer by using a brace assembly having curvilinear brace elements for the purpose of causing a wider area for the user to access to the sample area.

14. Claims 1-3, 6, 9, 11-12, 15, 17 and 18, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoda et al (U.S. Patent No. 6,239,905) in view of Mayer.

Toyoda et al disclose an inverted microscope having a means for adjusting the distance between an objective lens and a stage supporting a sample. In the embodiment as described in column 6 and shown in fig. 3, the inverted microscope comprises a C-shaped frame for supporting a head portion (1)

supporting a revolver (5) having plural objectives and a base portion (2) supporting a stage. A mechanism for adjusting the distance between the revolver supporting the objectives and the stage supporting a sample comprises slidable members (31, 32) which slide along the guides provided in the members (15, 18) via an operation by a motor. As a result, the length of the mechanism supporting the base portion over the head portion is expanded and/or contracted by the change in length of the mechanism constituting by the members (15, 18, 31, 32). It is noted that Toyoda et al do not clearly disclose a method for operating their microscope; however, it would have been obvious to one skilled in the art at the time the invention was made to set forth a set of steps including the step of providing a microscope having a C-shaped frame for supporting a head portion (1) supporting a revolver (5) having plural objectives and a base portion (2) supporting a stage and the step of adjusting the distance between the revolver supporting the objectives and the stage supporting a sample by sliding the brace members (31, 32) along the guides provided in the brace members (15, 18) via an operation by a motor in the microscope of Toyoda et al for the purpose of focusing the microscope.

The microscope having a C-shaped frame for supporting a head portion (1) supporting a revolver (5) having plural objectives and a base portion (2) supporting a stage and a mechanism for adjusting the distance between the revolver supporting the objectives and the stage supporting a sample as provided by Toyoda et al does not disclose the curvilinear shape of the brace assembly.

However, a change in shape is considered as an obvious matter and within the level of one skilled in the art as decided in the Courts. See *In re Dailey et al*, 149 USPQ 47 (CCPA 1976). Further, the use of a brace assembly having shape different than from a linear configuration is also implied by Mayer as can be seen in page 28, lines 10-12. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the brace assembly connecting the head portion and the base portion of a microscope as provided by Mayer by using a brace assembly having curvilinear brace elements for the purpose of causing a wider area for the user to access to the sample area.

15. Claims 4-5, 7-8, 10, and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoda et al in view of Mayer as applied to claims 1 and 11 above, and further in view of Topkaya et al (U. S. Patent No. 5,332,881).

The combined product as provided by Toyoda et al and Mayer does not disclose the use of a hydraulic cylinder or piezo element in the brace assembly for the purpose of varying the length of the whole brace assembly. However, the use of a mechanism utilizing hydraulic cylinder and/or piezoelectric element for the purpose of moving the position of a lens system with respect to a reference is known to one skilled in the art as can be seen in the system provided by Topkaya et al. In particular, Topkaya et al disclose a mechanism for adjustment or displacement a lens mounting which is selected from a hydraulic setting device or an electric-motor device or a piezoelectric setting device. See column 3, claims 3 and 18, for example. It is noted that the use of a piezoelectric setting

device or a hydraulic setting device will make the brace element of the brace assembly as a composite of different material and its resonant frequency is not a harmonic or sub-harmonic of the fundamental frequency of the frame of the microscope. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the combined product provided by Toyoda et al and Mayer by using a brace assembly whose components are able to move by an operation of a hydraulic cylinder or a piezoelectric device as suggested by Topkaya et al for the purpose of varying the length of the brace assembly to adjust or displace a lens system in a focusing process.

Conclusion

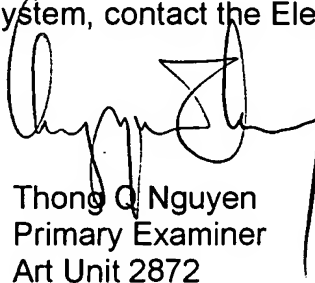
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references are cited as of interest in that each discloses a mechanism for connecting a head portion and a base portion of a microscope.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen
Primary Examiner
Art Unit 2872
